

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

MAR 30 2009

DEPARTMENT OF
WATER RESOURCES**A. GENERAL INFORMATION**Permit No. 63-315981. Owner: City of Nampa Phone No.: 208-466-6000Current Address: 411 3rd St. S., Nampa, ID 836512. Accompanied by: Marcos Hernandez EXAM DATE: 2/23/2009Address: Nampa City Water Works, 24 1st St. S., Nampa, ID 83651 Phone No. 208-941-0047Relationship to Permit Holder: Water System Technician3. Source: Ground Water tributary to _____**B. OVERLAP REVIEW**1. Other water rights with the same place of use: See Attachment B2. Other water rights with the same point of diversion: None**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

Ident No.	Gov't Lot	1/2	1/4	1/4	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
			NE	SE	8	3N	2W	Canyon	Exam, 2006 aerial photo

2. Place(s) of Use: **Municipal use within the service area for the City of Nampa as described on the permit.**Indicate Method of Determination Exam

TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

Municipal use within the service area for the City of Nampa currently on record with IDWR

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe id as applicable. See Attachment C

Scale: 1" = _____

☐ Copy of USGS Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

☐ Aerial Photo Attached (required for irrigation of 10+ acres)

☐ Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
	Franklin	7.5	Submersible	Berkeley 6T7.5-275	P7463FVCR; 6-inch discharge; 4-inch submersible column pipe

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Pump Curve						

2. **Measurements:** Pump curve supplied by Coonse Well Drilling (Attachment D)

7.5 hp Pump:

Pumping Water Level (PWL): The well log shows 300 gpm airlift pumping from 105'. Static water level was reported at 11'. Pump was set at 63'. Assume PWL at 65' (worst case scenario)

TDH: 69' (65' PWL, *4' friction loss, 0 psi discharge pressure)

Discharge rate at 69' TDH = 275 gpm (from pump curve)

The pump curve indicates that the system can operate well beyond the permit limitation of 0.20 cfs (90 gpm)

*Friction Loss: 63' pump setting, 4" column. Head loss (friction) = $5.5'/100$ or $63'/100 \times 5.5' = 3.5'$ (assume 4')

E. NARRATIVE/REMARKS/COMMENTS

An 8-inch well equipped with a 7.5-hp submersible pump supplies supplemental municipal water for landscape irrigation of 30 acres at the Karcher Road Interchange. The well discharges ground water into a storm water detention pond, which then flows into a 4' X 16' wet well. One 3-hp and two 15-hp variable speed submersible pumps deliver water from the wet well into a buried pressurized irrigation system located throughout the project area. The production well and wet well are located side-by-side just east of the pond in the NESE, Section 8. The primary source of irrigation water for the landscaping is surface water from Pioneer Irrigation District that is discharged into the pond along with collected storm water. The wet well intake pipe is located 18 inches above the pond floor resulting in less than 1 acre-foot of pond volume actually used for irrigation water storage. If the water level in the pond falls low enough to expose the intake pipe during the irrigation season, ground water diverted under this permit can provide back-up water to the irrigation system. The well/intake pipe system, landscape and irrigation system diagrams (CADD files) are included as Attachment E.

Based on the field exam findings, a licensing amendment is necessary to change the point of diversion from the NWSE to the NESE, Section 8.

Have conditions of permit approval been met? see below yes ____ no

Water-bearing zone on permit is 11 to 100 feet. Water-bearing zone actually developed was 69 to 110 feet (based on well driller's report information). Recommend changing water-bearing zone to 60 to 120 feet. All other conditions have been met.

F. FLOW CALCULATIONS

Yes Additional Computation Sheets Attached

Measured Method:

(Attachment D: Pump Curve)

7.5 hp pump curve: 275 gpm or 0.61 cfs at 69 feet TDH

Limited to 0.20 cfs per permit

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$

$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$

$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$

2. Volume Calculations for Other Uses:

Volume is typically not applicable for a municipal water right. However, the municipal use developed under this permit has been limited to irrigation of approximately 30 acres at the Karcher Interchange. The well is not utilized for typical year-round municipal purposes, but rather the 260-day irrigation season use (3/1 through 11/15). Therefore, the lesser of either (1) the typical 4.5 af/ac irrigation volume limitation for the current 30 acre place of use or (2) the diversion rate multiplied by the irrigation season is appropriate for licensing of this water right.

Potential volume based on rate = $0.20 \text{ cfs} \times 260 \text{ days} \times 1.9835 \text{ af/cfs-day} = 103.1 \text{ afa}$

Potential volume based on irrigated area = $30 \text{ acres} \times 4.5 \text{ acre feet per acre} = 135 \text{ afa}$

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Municipal	3/1	11/15	0.20	103.1

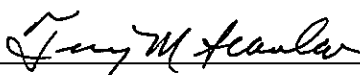
2. Recommended Amendments

X Change P.D. as reflected above Add P.D. as reflected above None

 Change P.U. as reflected above Add P.U. as reflected above X Other (Water Bearing Zone 60-120')

I. AUTHENTICATION

Field Examiner's Name Terry M. Scanlan, P.E., Certified Water Right Examiner No.09-129 Date 3-29-09

Field Examiner's Signature 

Reviewer _____ Date _____





ATTACHMENT A

PERMIT RECORD AND PROOF OF BENEFICIAL USE

Close

IDAHO DEPARTMENT OF WATER RESOURCES
Water Permit Report

2/18/2009

WATER RIGHT NO. 63-31598

Owner Type	Name and Address
Current Owner	CITY OF NAMPA 411 3RD ST S NAMPA, ID 83651 (208) 466-6000
Original Owner	STATE OF IDAHO DEPT OF TRANSPORTATION PO BOX 8028 BOISE, ID 83707-2028 (208)334-8300

Priority Date: 10/29/2002
Status: Active

Source	Tributary
GROUND WATER	

Beneficial Use	From	To	Diversion Rate	Volume
MUNICIPAL	01/01	12/31	0.2 CFS	
Total Diversion			0.2 CFS	

Location of Point(s) of Diversion:

GROUND WATER|NWSE|Sec. 08|Township 03N|Range 02W|CANYON County

Place(s) of use: Large POU Info

Conditions of Approval:

- 1.26A Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which permit holder had no control.
- 2.046 Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department.
3. Water bearing zone to be appropriated is from 11 to 100 feet.
- 4.007 The right holder shall not assign or sell the permit without first securing the written approval of the Department of Water Resources.
- 5.01M After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to determine the amount of water diverted from power records and shall annually report the information to the Department.
- 6.121 The Director retains jurisdiction to require the right holder to provide purchased or leased natural flow or stored water to offset depletion of Lower Snake River flows if needed for salmon migration purposes. The amount of water required to be released into the Snake River or a tributary, if needed for this purpose, will be determined by the Director based upon the reduction in flow caused by the use of water pursuant to this permit.

Dates:

Proof Due Date: 04/01/2009
Proof Made Date:
Approved Date: 04/25/2005
Moratorium Expiration Date:
Enlargement Use Priority Date:
Enlargement Statute Priority Date:
Application Received Date: 10/29/2002
Protest Deadline Date: 11/03/2003
Number of Protests: 0
Field Exam Date:.
Date Sent to State Off:
Date Received at State Off:

Other Information:
State or Federal:

ATTACHMENT B

**NAMPA NON-POTABLE WATER RIGHTS
(SERVICE AREA OVERLAPS)**

City of Nampa – Water Rights for Non-Potable (Irrigation) Use

63-2449
63-2450
63-2484
63-2780
63-2787
63-2943
63-3257
63-5257
63-7003
63-7708
63-7954
63-8312
63-9853
63-9889
63-10319
63-11894
63-12322
63-31961
63-32179



ATTACHMENT C
2006 AERIAL PHOTOS

T3N R2W

2006 Aerial Photo



Legend

-  Irrigated Areas
-  Point of Diversion
-  Sections

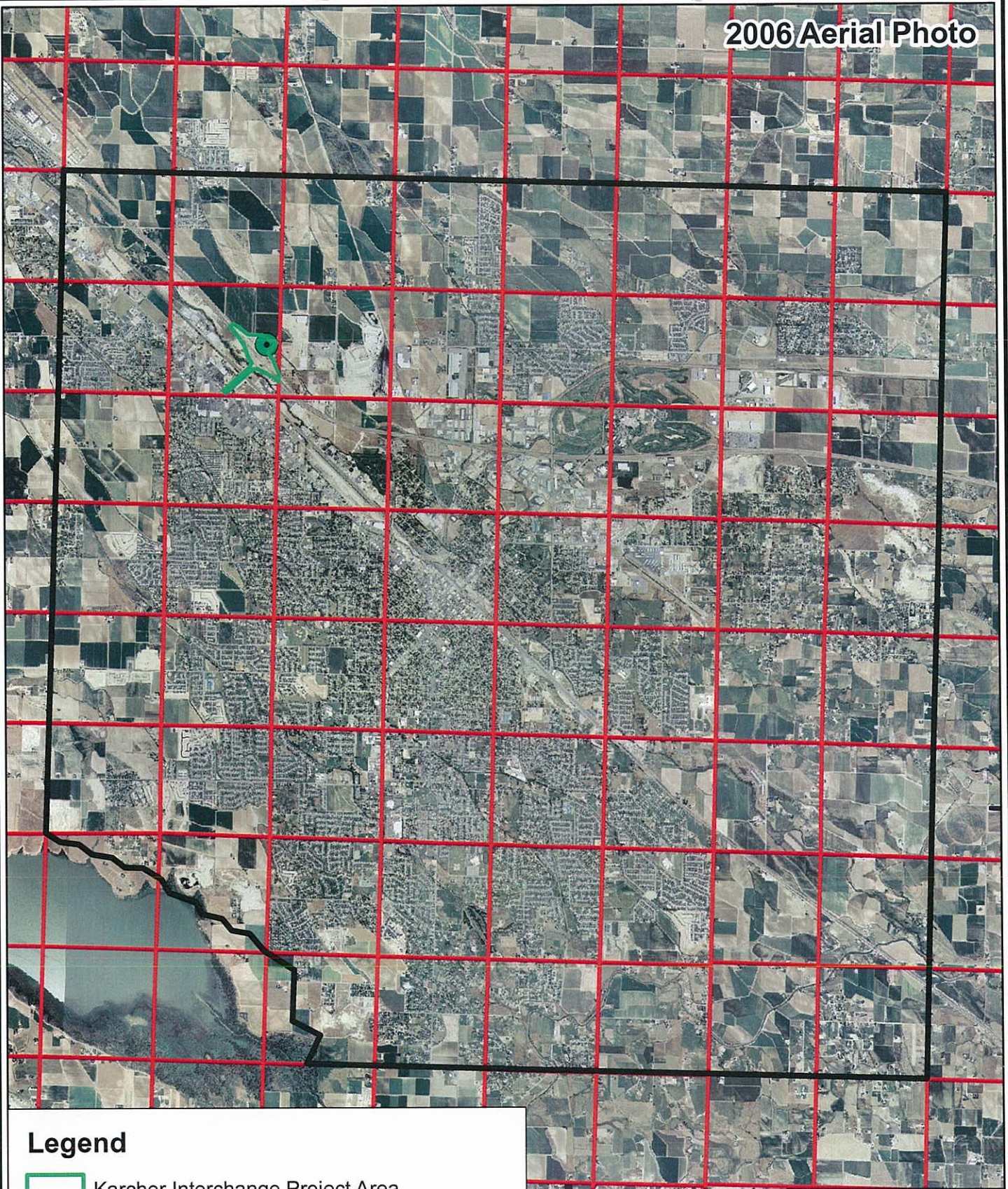
Permit 63-31598
City of Nampa



0 260 520
Feet



2006 Aerial Photo



Legend

-  Karcher Interchange Project Area
-  Point of Diversion
-  Current GIS Shape for Nampa's Service Area
-  Sections

Permit 63-31598
City of Nampa



0 3,900 7,800
Feet





ATTACHMENT D
PUMP CURVE & WELL LOG

Coonse Well Drilling & Pump Co., Inc.

15851 GUNFIRE ROAD
CALDWELL, ID 83607
PH # 454-0190 - FAX # 454-2743

Fax

To: SPF WATER ENGINEERING

From: BEVERLY COONSE

ATTN: LORI

Fax: 383-4156

Date: February 18, 2009

Phone: 383-4140

Pages: COVER + 4 pages

Re: Karcher IC Project

CC:

☐ **Urgent** ☒ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

Comments: Here is information you requested regarding the pump and motor we set on the Karcher IC project.

Motor – 6" Franklin Electric Submersible motor, 7.5 HP 3PH 460V

Pump-end – Berkeley 6T7.5-275 Submersible Turbine pump end w/ 6" mtr brkt Cl/Bowl SS/Imp 2 stg 4" NPT

Pump Panel – P7463FVCR = 7 ½ HP, 460 volt

Set @ 63 ft on 4" STD Galv Pipe T&C

See attached pump performance curve and capacity info. Let us know if you have any questions or need any additional information.

Aug 01 06 02:39p

Mitchell Lewis & Staver

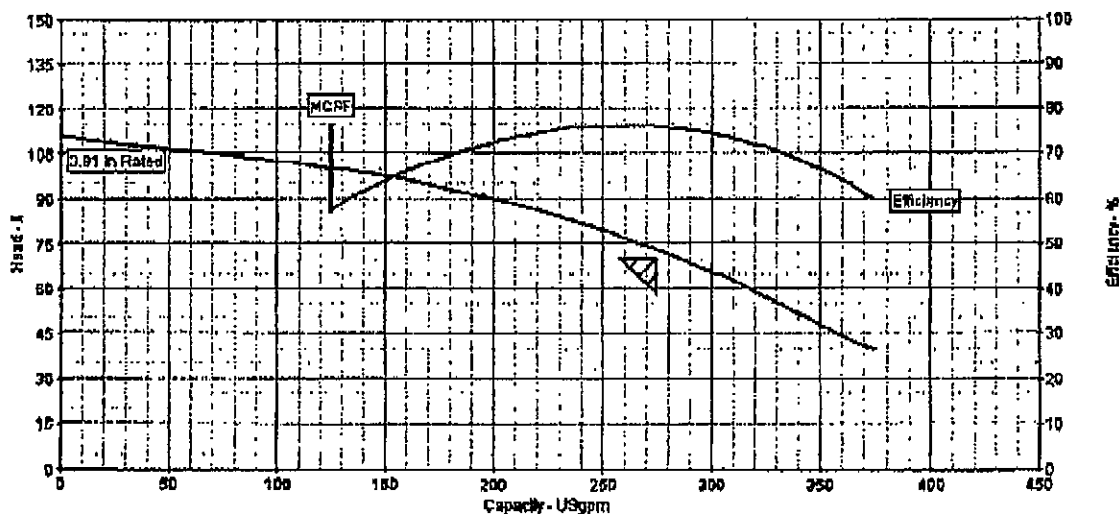
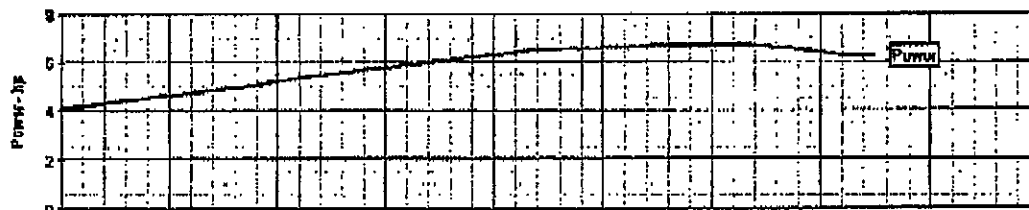
208-895-8341

P. 1

Berkeley Electronic Catalog

Pump Performance Datasheet

Customer	CENTRAL PAVING	Quote number	6T7.5-275
Customer reference	KARCHER JOB	Pump size	2
Item number		Stages	6T7.5-275(2@4.20x3.50)
Service		Based on curve number	01 Aug 2006
Quantity of pumps	1	Date last saved	
Operating Conditions		Liquid	
Flow, rated	275.0 USgpm	Liquid type	Water
Head, rated (requested)	70.00 ft	Additional liquid description	
Head, rated (actual)	72.37 ft	Solids diameter, max	0.00 in
Suction pressure, rated / max	0.00 / 0.00 psig	Temperature, max	88.00 deg F
NPSH available, rated	Ample	Fluid density, rated / max	0.998 / 0.998 SG
Frequency	60 Hz	Viscosity, rated	1.00 cP
Performance		Material	
Pump speed, rated	3450 rpm	Material requested	Not specified
Impeller diameter, rated	3.91 in	Material selected	Not specified
Impeller diameter, maximum	3.91 in	Pressure Data	
Impeller diameter, minimum	3.91 in	Maximum working pressure	47.99 psig
Efficiency	75.85 %	Maximum allowable working pressure	580.0 psig
NPSH required / margin required	N/A / 0.00	Maximum allowable suction pressure	N/A
Specific speed / Suction specific speed	N/A / 0 US units	Hydrostatic test pressure	N/A
MCSF	125.0 USgpm	Driver & Power Data	
Head, maximum, rated diameter	110.8 ft	Driver sizing specification	Rated power
Head rise to shutoff	N/A %	Margin over specification	0.00 %
Flow, best eff. point (BEP)	259.8 USgpm	Service factor	1.00 (used)
Flow ratio (rated / BEP)	105.85 %	Power, hydraulic	5.02 hp
Diameter ratio (rated / max)	100.00 %	Power, rated	6.63 hp
Head ratio (rated dia / max dia)	96.73 %	Power, maximum, rated diameter	5.88 hp
Viscous coefficients (CQ / CH / CE)	1.00 / 1.00 / 1.00	Minimum recommended motor rating	7.50 hp / 5.59 kW (Fixed)
Selection status	Acceptable		



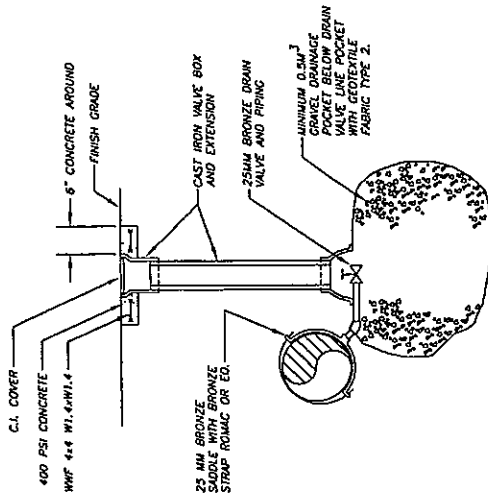
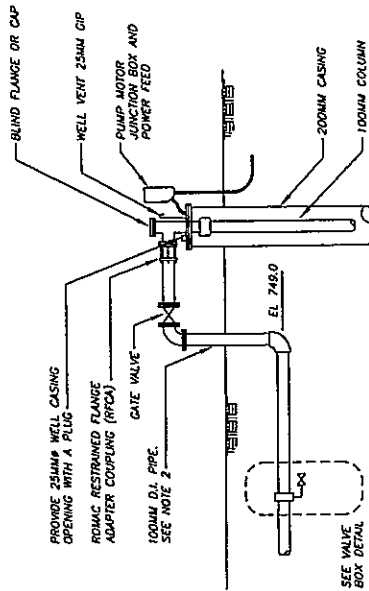
ATTACHMENT E

KARCHER INTERCHANGE PROJECT DIAGRAMS
(CADD FILES)

WELL/INTAKE PIPE DIAGRAMS

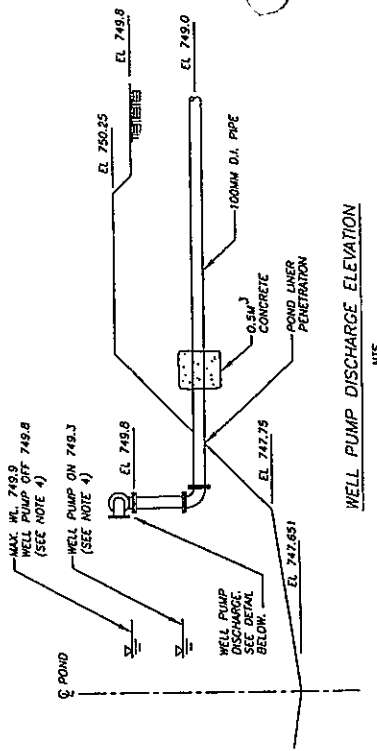
NOTES

- Contractor shall determine bottom elevation of motor and casing termination elevation.
- D.I. pipe shall be Class 53. Unless otherwise shown as flange connection, all joints of pipe and fittings shall be restrained.
- Pump/well shall be located within fence and adjacent to concrete pad for irrigation pump. See sheet 323.
- Pump shall be turned on at EL 749.3 and off at 749.6. Provide alarm due to motor overload for failure. Float switches shall be located in wet well for irrigation pump.

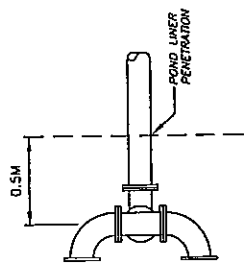


VALVE BOX DETAIL
N.T.S.

WELL PUMP DETAIL
N.T.S.



WELL PUMP DISCHARGE ELEVATION
N.T.S.



WELL PUMP DISCHARGE PLAN
N.T.S.

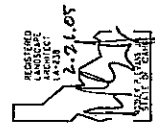
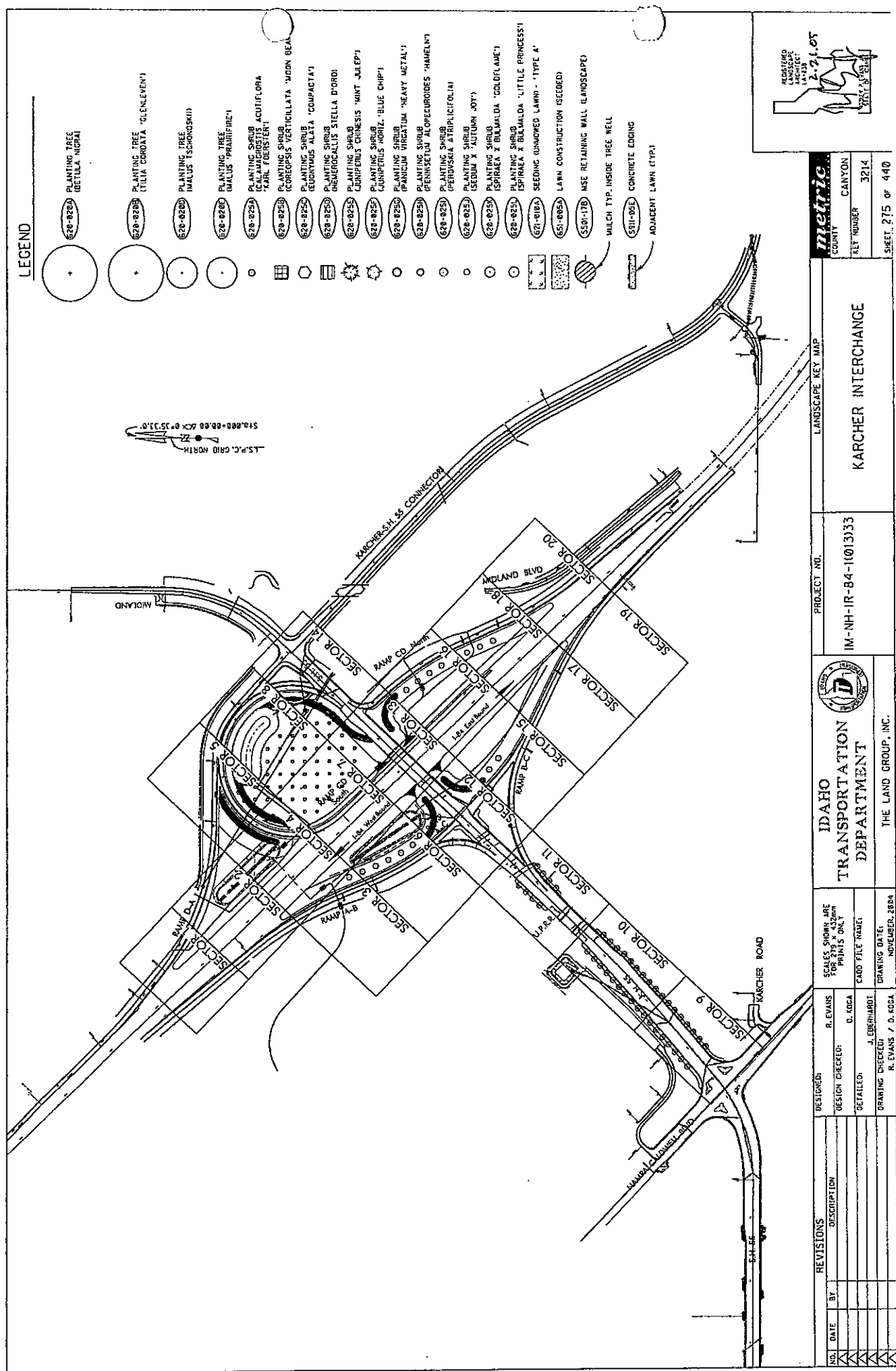


ALL DIMENSIONS ARE IN MILLIMETERS
UNLESS NOTED OTHERWISE

REVISIONS		IDaho TRANSPORTATION DEPARTMENT		metric		BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	DESIGNED	CHECKED	SCALE	BRIDGE INSPECTION MASTER KEY
1	3/05		FINAL SUBMITTAL	C. Shien	G. Furrer	1:1	BRIDGE NO. 3214
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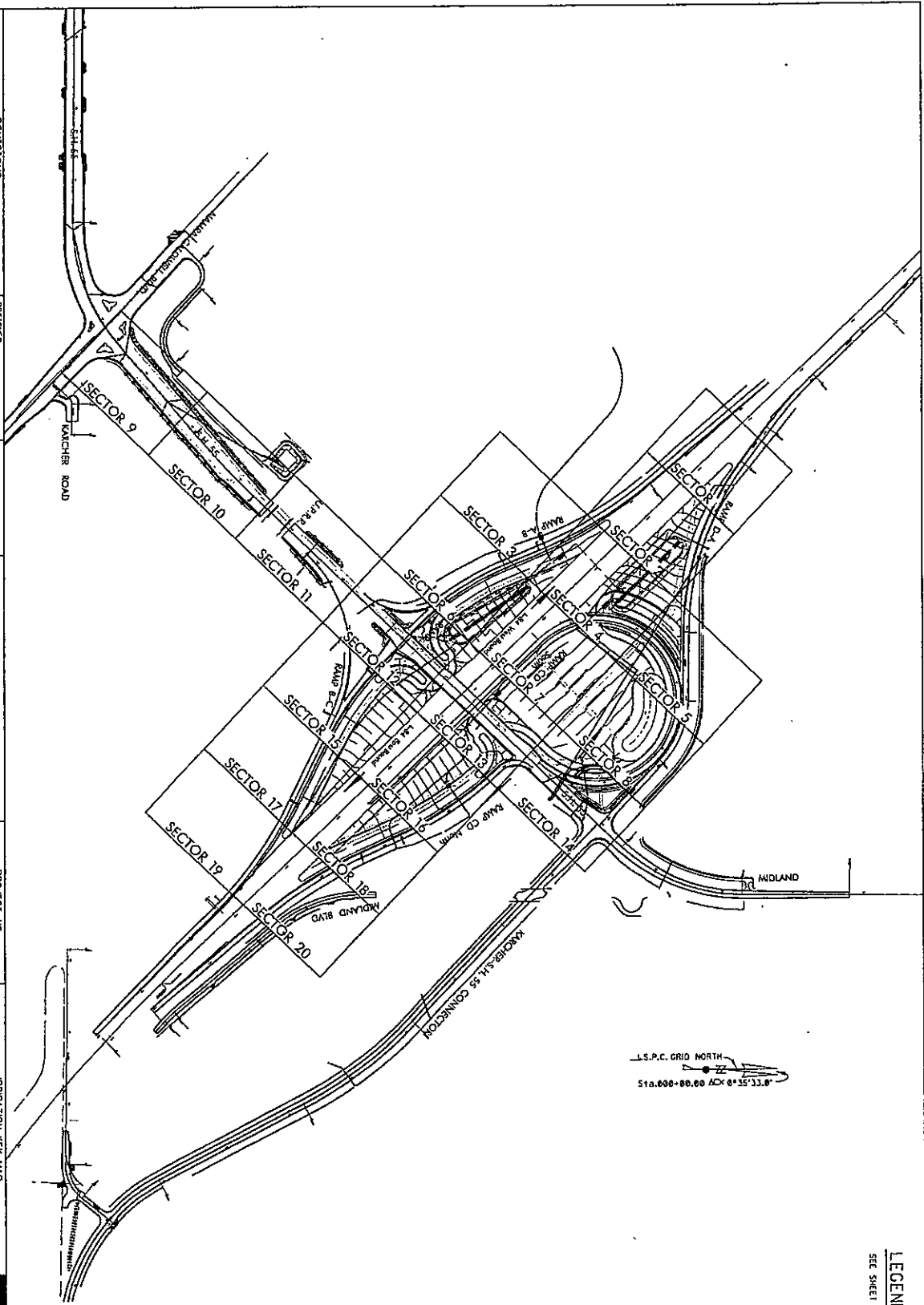
LANDSCAPE DIAGRAM



SHEET 275 OF 440

SPRINKLER SYSTEM DIAGRAM

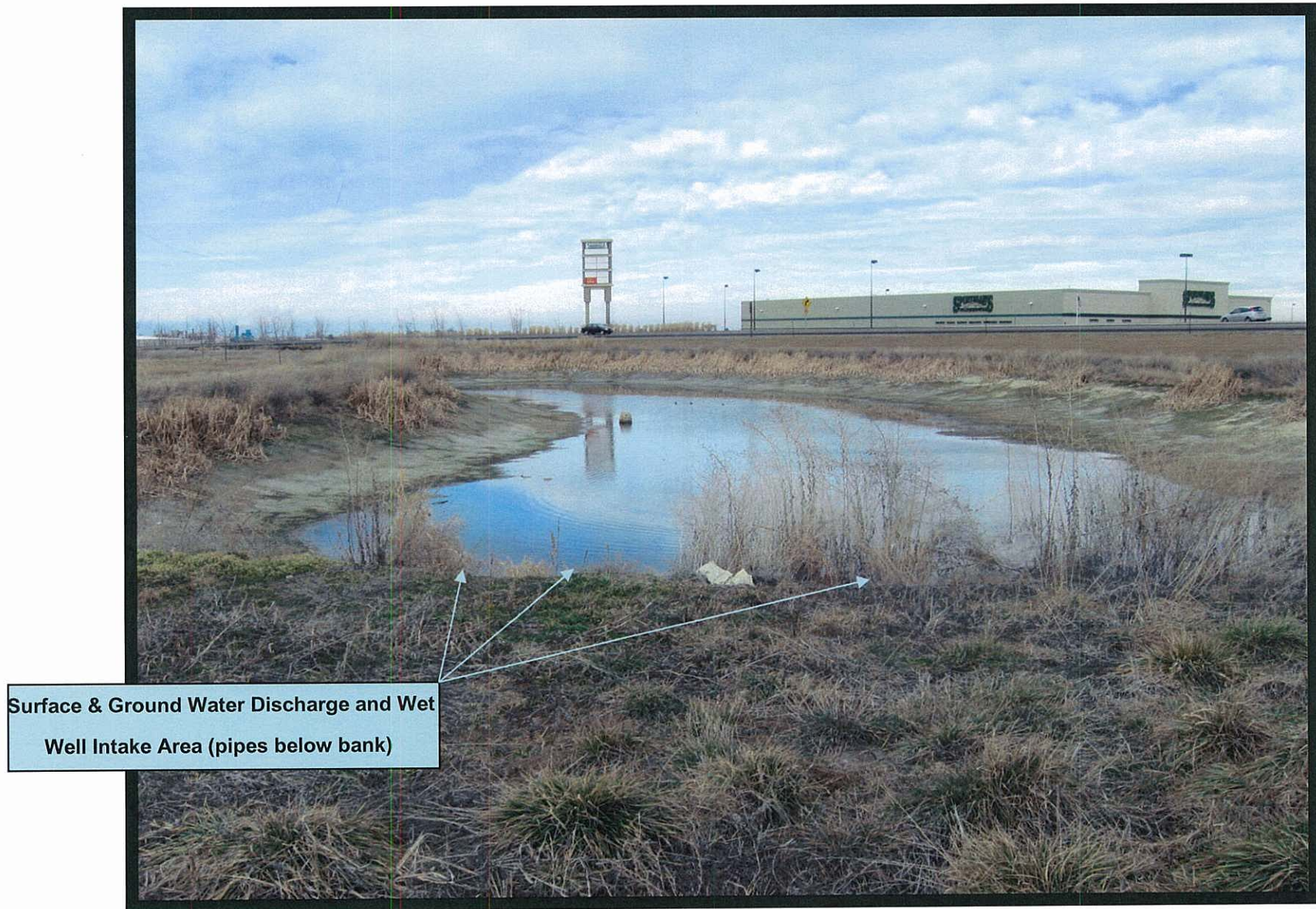
LEGEND
SEE SHEET 310 FOR IRRIGATION LEGEND



REVISIONS		DESIGNED		IDaho TRANSPORTATION DEPARTMENT		PROJECT NO.		IRRIGATION KEY MAP	
NO.	DATE	BY	DESCRIPTION	DESIGNER	SCALE: SHOWN ARE FOR PRINT ONLY	PROJECT NO.	1M-NH-IR-84-1103133	IRRIGATION KEY MAP	1M-NH-IR-84-1103133
				DESIGN CHECKED: D. KOCA	CAAD FILE NAME:				
				DETAILED: J. EBERHART					
				DRAWING CHECKED: R. EVANS / D. KOCA	DRAWING DATE: NOVEMBER, 2004				
					THE LAND GROUP, INC.				
					KARCHER INTERCHANGE				
					COUNTY CANYON				
					KEY NUMBER 3214				
					SHEET 297 OF 440				

REGISTERED LANDSCAPE ARCHITECT
1-1-2105
1-1-2105
1-1-2105

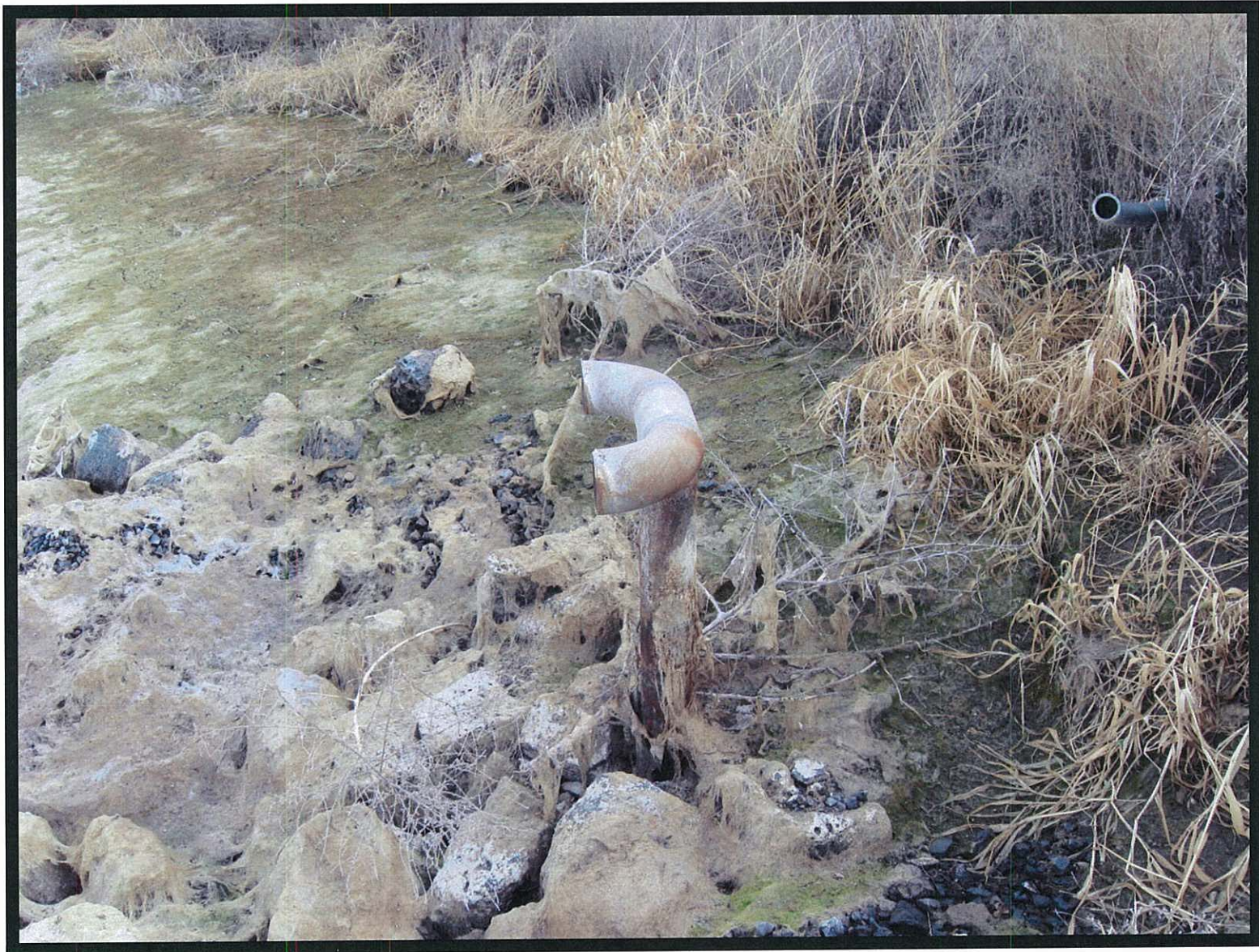
ATTACHMENT F
PHOTOS



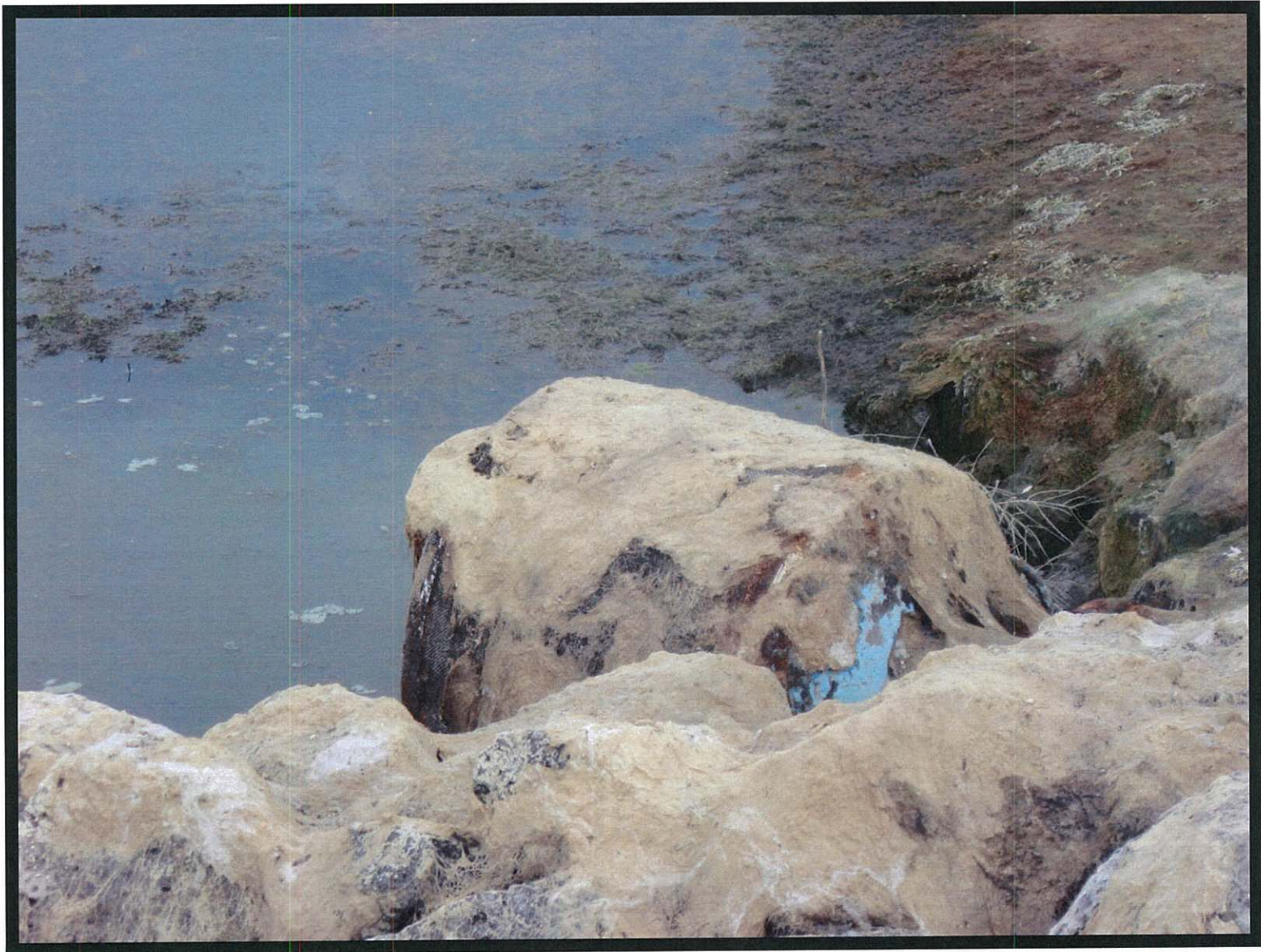
Storm Water Detention Pond (looking west)



Point of Diversion Located Just East of Pond



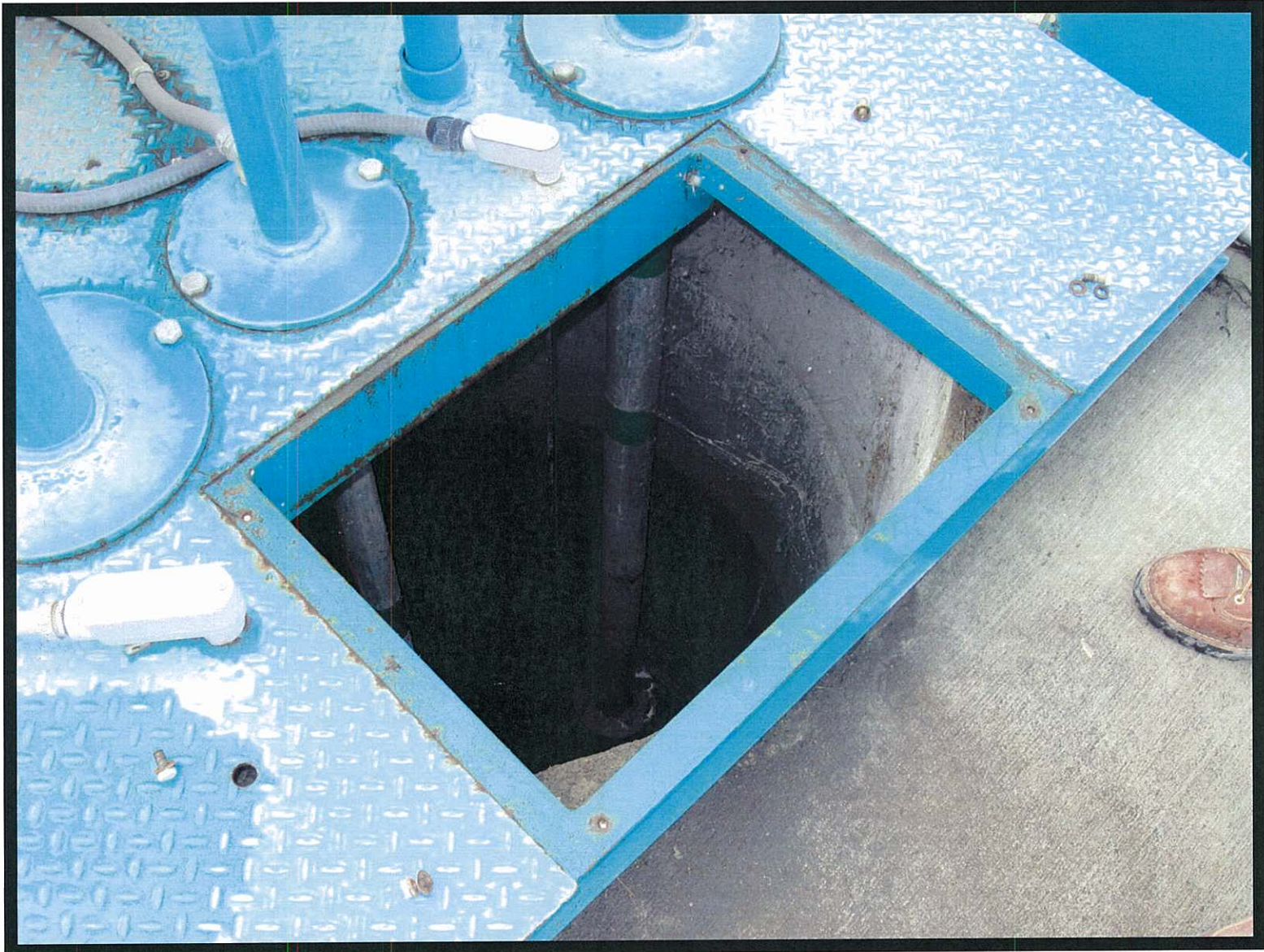
Ground Water Well Discharge Pipe Located on East Side of Pond (just west of well)



Wet Well Intake Pipe Located on East Side of Pond (just west of well)



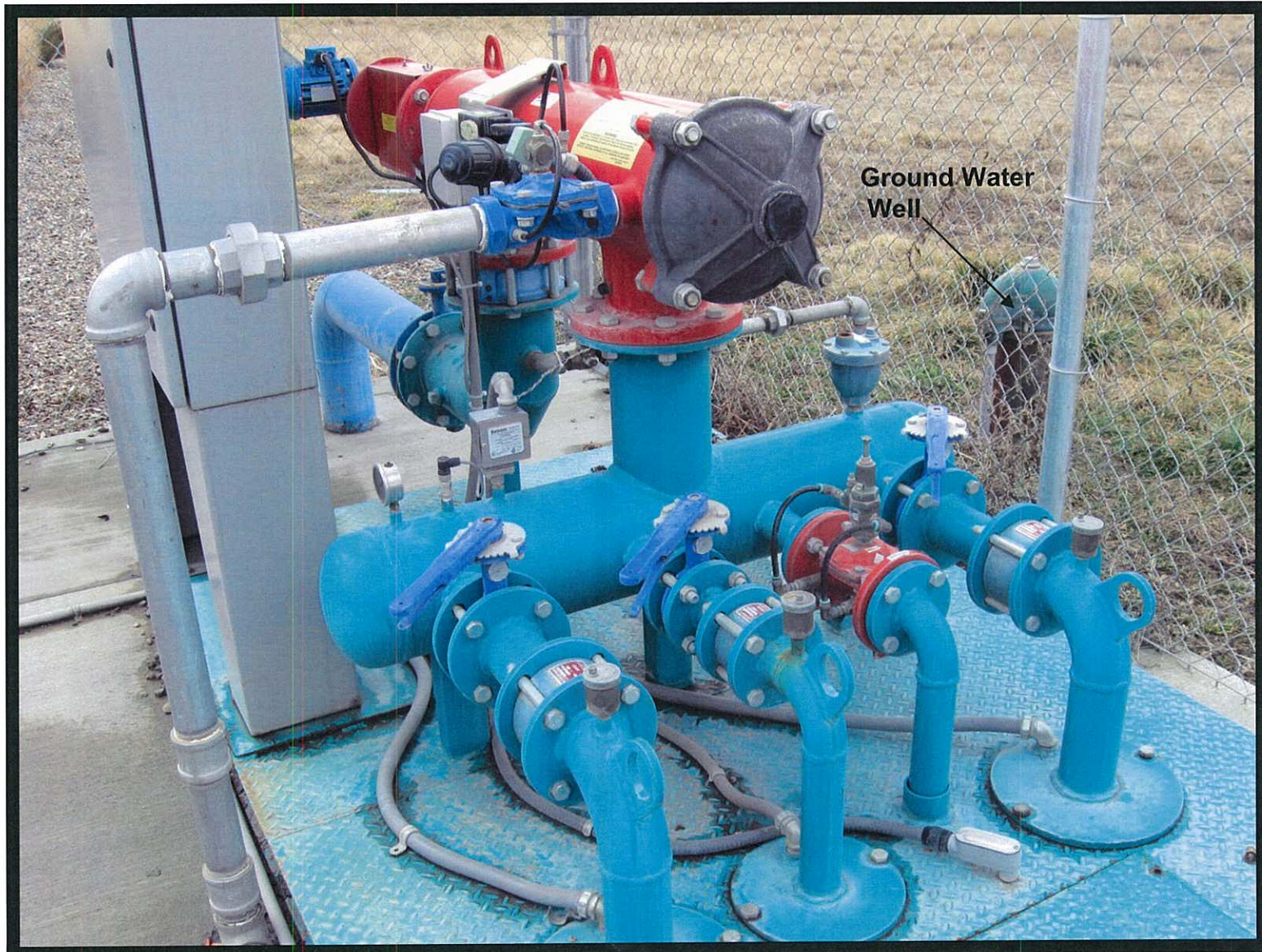
Discharge Pipe for Surface Water Located on East Side of Pond (just west of well)



Wet Well Located Just East of Diversion Well



Wet Well & Three Submersible Pumps



Sprinkler System Booster Pump Station